

❖ TM-2030 GE / TMC-2030 GE

Progressive Scan CCD



- 1" progressive scan IT CCD (Kodak KAI-2093)
- 1920 x 1080 pixels (HDTV format)
- 7.4 μm square pixels
- 32 fps in dual-tap mode
- SW selectable single-tap mode @ 16 fps
- 12-bit A/D (linear) or 8-bit/10-bit with look-up table (LUT)
- GigE Vision Ethernet output and analog output
- 100 m with standard CAT 5E or CAT 6 cable
- Full-frame shutter to 1/16,000 sec.
- Asynchronous reset, no-delay, pulse width control shutter
- Defective pixel compensation
- PIV (particle imaging velocimetry) mode
- Extensive software developer's kit (SDK)
- Monochrome or color

GigETM
VISION

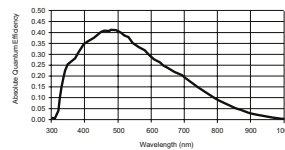


Specifications for TM-2030GE/TMC-2030GE

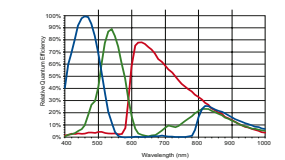
Specifications	TM-2030GE/TMC-2030GE
Sensor	1" progressive scan interline transfer CCD
Active area	14.2mm x 8.0mm
Active pixels	1920 (H) x 1080 (V)
Cell size	7.4 μ m x 7.4 μ m
Readout Mode	1920 (H) x 1080 (V) @ 32 Hz (dual-tap) or 16 Hz (single-tap) selectable
Synchronization	Internal/External auto switch HD/VD, 4.0 Vp-p impedance 4.7K Ω VD= 32.3 $\pm$ 2%, non-interlace HD= 36.4 kHz $\pm$ 2%
Pixel clock	40.00 MHz
S/N ratio	>57 dB
Sensitivity	Mono 0.45 lux $f=1.4$ (no shutter) @ 32 fps, Color 3.6 lux $f=1.4$ (no shutter) @ 32 fps, Pixel sensitivity: 14 μ V/e-
Video output	Analog 1.0 Vp-p, 75 Ω Digital Gigabit Ethernet (8-bit/10-bit/12-bit)
Color (RMC/TMC-2030 only)	Raw Bayer output for host-based interpolation
Gamma	Programmable LUT (Gamma 1.0 std)
Shutter speed (programmable)	1/32 to 1/16,000 sec in increments of 27.5 μ s
Lens mount	C, F, M42 mount (use 1" format lenses)
Power	12V DC $\pm$ 10%, 690 mA (typical at 25° C)
Operating temperature	-10° C to 50° C
Vibration	7 Grms (10 Hz to 2000 Hz) Random
Shock	70 G, 11 ms, half-sine
Dimensions (H x W x L)	51 mm x 51 mm x 85 mm
Weight	215 g (without tripod)

Spectral Response

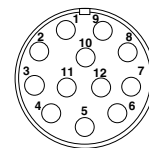
TM-2030GE (monochrome)



TMC-2030GE (color)



Connector Pin-out

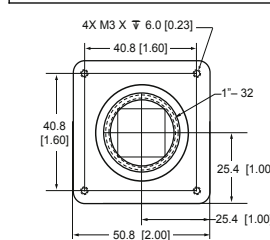


12-Pin Connector

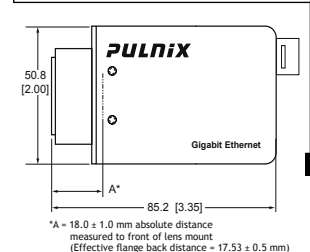
1 GND (power)	7 VD in
2 +12V	8 Strobe out
3 GND (analog)	9 HD in
4 Video out	10 Reserved
5 GND (digital)	11 NC
6 VINIT in	12 Reserved

Dimensions

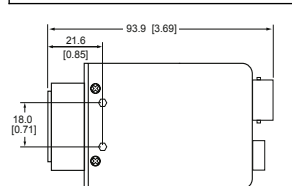
Front view



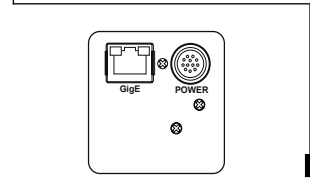
Side view



Bottom view



Rear view

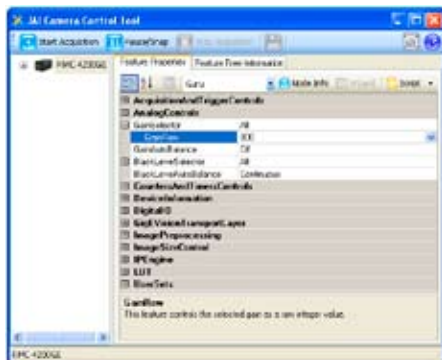


GUI Interface

This camera can interface with any GigE Vision compliant software and hardware. The JAI SDK is provided to allow users to control various camera functions including:

- Exposure control for free running, triggered, and pulse width control.
- Gain and black Level
- Save settings
- Load settings
- LUT control to maximize dynamic range
- Scan mode selection.
- Pulse generators

The SDK provides functions for controlling image capture, as well as easy interfaces for setting camera functions and an API for .NET and C++ interfaces. CPU usage can be kept low via the JAI GigE Vision Filter Driver.



Ordering Information

Camera	
Lead Processing	TM-2030GE (mono), TMC-2030GE (color)
RoHS Compliant	RM-2030GE (mono), RMC-2030GE (color)
Optional Functions	
Internal IR Filter Added	OP3-1
Optical Filter Removal	OP3-2 (color only)
Glassless CCD Imager	OP21
Ultraviolet Imager	OP21-UV (monochrome only)
F mount	OP65-6
M42 mount	OP65-7
M42 mount, 10mm back focus	OP65-8
Optional Accessories (must be ordered separately)	
Tripod Adapter Kit	Tp-20
Power Supply/2m cable	PD-12UUP/12P-02S
Power Supply	PD-12UUP series (includes power connector)

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See the possibilities

